

REMARKS/ARGUMENTS

Claims 1-18 and 20-42 are currently pending in this application.

Claims 1-2, 7-10, 12, 14, 21-25, 27-35 and 37 have been rejected under 35 U.S.C. § 102(b) as being anticipated by U.S. Patent No. 5,988,971 to Fossey (“Fossey”). Claims 3-4 and 39-40 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fossey in view of U.S. Patent No. 6,024,393 to Shamlou et al. (“Shamlou”). Claims 5-6 and 41-42 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fossey. Claims 11, 13, 15-16 and 36 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fossey in view of U.S. Patent No. 6,454,332 to Govzman et al. (“Govzman”). Claims 17-18, 20 & 26 have been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fossey in view of U.S. Patent No. 6,164,894 to Cheng (“Cheng”). Claim 38 has been rejected under 35 U.S.C. § 103(a) as being unpatentable over Fossey in view of U.S. Patent No. 6,040,585 to Hsiao (“Hsiao”).

Response to Advisory Action

In the Advisory Action mailed December 11, 2007 the Examiner claims that “it is a simple matter to use Fossey’s apparatus in the manner described in claims 1, 21, & 29.” To the contrary, Applicant respectfully submits it is impossible to use the Fossey apparatus in the manner described in claims 1, 21, & 29 because the sensor 61 of Fossey cannot “determine the **position and orientation** of the substrate within the carrier from at least two angles with respect to the critical plane.” (emphasis added).

The sensor 61 of Fossey is a downward facing capacitance sensor to detect whether a wafer is present or absent in a slotted location. According to Fossey, “the downward looking sensors 61...scan each slot location, sensing the presence or absence of the wafer’s upper edge at

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each slot. In this manner, the system “maps” the presence or absence of wafers in each respective slot of the cassette.” Col. 7, ll. 64-67 (emphasis added). Fossey expressly defines “map” or “mapping” to only include data on the “presence or absence” of wafers. The mapping definition of Fossey does not rise to the detail and specificity of determining the position and orientation of a substrate within the carrier from at least two angles with respect to the critical plane. Fossey does not disclose or teach such a mapping technique. There is no support in the Fossey disclosure for a broader interpretation; mapping, according to Fossey, is a binary, presence-or-absence determination. There is no mention whatsoever in Fossey of the sensor determining position and orientation from at least two angles.

Further, despite the Applicant’s efforts to illuminate the distinctions between the claimed invention and the Fossey reference, specifically in independent claims 21 and 23, the Examiner has failed to consider all of the independent claims, instead relying on the rejection of claim 1. Specifically, Applicant has repeatedly stated that independent claim 21 recites the steps of “measuring coordinate information of the substrates in the carrier with a mapping sensor...”, and “sequentially indexing the robotic arm to the substrates in the carrier according to the stored coordinate information...” Among other missing elements, Fossey does not disclose such a system or method steps. As mentioned above, the sensor in Fossey does not measure coordinate information of the substrates or sequentially index the robotic arm; it determines presence or absence only.

Additionally, the Examiner has failed to consider Applicant’s arguments and amendments with respect to independent claim 23. Claim 23 recites the steps of “recording the mean vertical substrate locations; generating a pick table including mean vertical substrate location data;” and “sequentially indexing the robotic arm according to the mean vertical

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substrate locations of the pick table.” Fossey does not disclose such a method, nor has the Examiner pointed to any part of the reference disclosing such a method. Applicant has made repeated attempts to bring these distinctions to the Examiner’s attention; however no mention is made of these claims in the previous Office Actions or Advisory Action. Applicant respectfully submits that these claims are patentably distinct from Fossey and requests consideration of the amendments and remarks made throughout the prosecution of this application.

Applicant asserts that independent claims 1, 21, 23 and 29 are in condition for allowance and respectfully requests favorable action in the form of a Notice of Allowance. Claims 2-18, 20, 22, 24-28 and 30-42, which depend from independent claims and contain all of the limitations recited therein, are also in condition for allowance.

CONCLUSION

For at least the reasons outlined above, Applicant submits that this application is in condition for allowance and requests favorable action in the form of a Notice of Allowance. Please apply any charges or credits to Deposit Account No. 50-1721.

Respectfully submitted,


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Date: March 26, 2008
Reg. No. 54,146

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